Experiment 5: SQUID

AIM: To create and configure Squid -proxy server

DESCRIPTION:

SQUID – PROXY SERVER

Squid is a full-featured web proxy cache server application which provides proxy and cache services for HyperText Transport Protocol (HTTP), File Transfer Protocol (FTP), and other popular network protocols. Squid can implement caching and proxying of Secure Sockets Layer (SSL) requests and caching of Domain Name Server (DNS) lookups, and perform transparent caching. Squid also supports a wide variety of caching protocols, such as Internet Cache Protocol (ICP), the HyperText Caching Protocol (HTCP), the Cache Array Routing Protocol (CARP), and the Web Cache Coordination Protocol (WCCP).

The Squid proxy cache server is an excellent solution to various proxy and caching server needs, and scales from the branch office to enterprise-level networks while providing extensive, granular access control mechanisms, and monitoring of critical parameters via the Simple Network Management Protocol (SNMP). When selecting a computer system for use as a dedicated Squid caching proxy server for many users ensure it is configured with a large amount of physical memory as Squid maintains an in-memory cache for increased performance.

Port No: 3128

Package name: squid

Configuration file: /etc/squid/squid.conf

PROCEDURE:

1. At a terminal prompt, enter the following command to install the Squid server:

$sudo apt install squid

2. Squid is configured by editing the directives contained within

the /etc/squid/squid.conf configuration file.

3. Change the access as shown below:

acl localnet src 192.168.234.139(your ip address)

acl blocksite dstdomain "/etc/squid/blocksite"

http_access deny blocksite

http_access allow localnet

#http_access deny all

http_access allow all

4. To block access to the website we must configure using

"/etc/squid/blocksite"

we edit the file by running:

$cd /etc/squid

$sudo gedit blocksite

5. Add the websites to block:
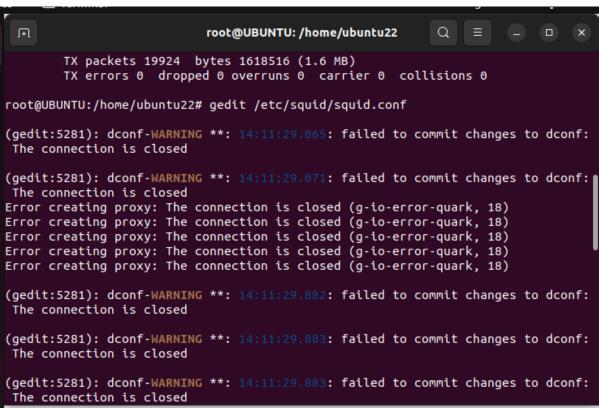
in this case, I am blocking youtube, facebook, google

6. To check the actual functioning of the proxy server go to the browser and click

settings, search proxy in connection settings.

7. To configure Proxy access to the internet

8. Select Manual Proxy configuration

9. Type your HTTP Proxy(IP Address) and Port number as 3128.

10. Select SOCKS v5

CONNECTING TO WEBSITE

11. Search for the blocked websites

12. Access is denied to the above websites.

RESULT:


```
GNU nano 6.2                    /etc/squid/squid.conf *
# INSERT YOUR OWN RULE(S) HERE TO ALLOW ACCESS FROM YOUR CLIENTS
#
include /etc/squid/conf.d/*.conf

# Example rule allowing access from your local networks.
# Adapt localnet in the ACL section to list your (internal) IP networks
# from where browsing should be allowed
#http_access allow localnet
http_access allow localhost

# And finally deny all other access to this proxy
http_access allow all
acl localhost src 10.0.2.15
acl blocksite dstdomain "/etc/squid/site"
http_access deny blocksite

#  TAG: adapted_http_access
#       Allowing or Denying access based on defined access lists
#
#       Essentially identical to http_access, but runs after redirectors

^G Help        ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit        ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^/ Go To Line
```

```
          TX packets 19924  bytes 1618516 (1.6 MB)
          TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

root@UBUNTU:/home/ubuntu22# gedit /etc/squid/squid.conf

(gedit:5281): dconf-WARNING **: 14:11:29.065: failed to commit changes to dconf:
 The connection is closed

(gedit:5281): dconf-WARNING **: 14:11:29.071: failed to commit changes to dconf:
 The connection is closed
Error creating proxy: The connection is closed (g-io-error-quark, 18)
Error creating proxy: The connection is closed (g-io-error-quark, 18)
Error creating proxy: The connection is closed (g-io-error-quark, 18)
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Error creating proxy: The connection is closed (g-io-error-quark, 18)

(gedit:5281): dconf-WARNING **: 14:11:29.882: failed to commit changes to dconf:
 The connection is closed

(gedit:5281): dconf-WARNING **: 14:11:29.883: failed to commit changes to dconf:
 The connection is closed

(gedit:5281): dconf-WARNING **: 14:11:29.883: failed to commit changes to dconf:
 The connection is closed
```

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(gedit:5281): dconf-WARNING **: 14:11:29.882: failed to commit changes to dconf:
 The connection is closed

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 The connection is closed

(gedit:5281): dconf-WARNING **: 14:11:29.883: failed to commit changes to dconf:
 The connection is closed
```

```
ubuntu22@UBUNTU:~$ sudo apt install squid
[sudo] password for ubuntu22:
ubuntu22 is not in the sudoers file.  This incident will be reported.
ubuntu22@UBUNTU:~$ su
Password:
root@UBUNTU:/home/ubuntu22# sudo apt install squid
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
squid is already the newest version (5.7-0ubuntu0.22.04.4).
The following packages were automatically installed and are no longer required:
  libwpe-1.0-1 libwpebackend-fdo-1.0-1
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 119 not upgraded.
root@UBUNTU:/home/ubuntu22# ipconfig
Command 'ipconfig' not found, did you mean:
  command 'ifconfig' from deb net-tools (1.60+git20181103.0eebece-1ubuntu5)
  command 'iconfig' from deb ipmiutil (3.1.8-1)
  command 'iwconfig' from deb wireless-tools (30~pre9-13.1ubuntu4)
Try: apt install <deb name>
root@UBUNTU:/home/ubuntu22# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.56.101  netmask 255.255.255.0  broadcast 192.168.56.255
        inet6 fe80::babf:b255:e5ba:c37c  prefixlen 64  scopeid 0x20<link>
```

All the commands have been executed and the output has been obtained successfully.